

A NEW SPECIES OF THE GENUS *LATHYS* (ARANEAE, DICTYNIDAE) FROM CHINA

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Abstract *Lathys chishuiensis*, a new species of the spider family Dictynidae was described from Guizhou Province, Southwest China. Detail description, genital figures and morphological images are given.

Key words Southwest China, Guizhou, Chishui, new species, Taxonomy.

1 Introduction

The Dictynidae spiders are small bodies (< 5 mm), uniseriate calamistrum, bipartite or entire cribellatum, 3 claws, 8 or 6 eyes and entelegyne. Epigyne weakly sclerotized and male palp usually without median apophysis, with slender embolus and backward directed conductor. Now 48 genera, 562 species recorded from the world including 12 genera, 36 species from China (Platnick, 2008; Song, Zhu & Chen, 1999). But most important revision works were focused on North America and Australia (Chamberlin & Gertsch, 1958; Forster, 1970).

The genus *Lathys* was proposed by Simon (1884) to replace the preoccupied genus *Lethia* Menge, 1869 with the type species, *Ciniflo humilis* Blackwall, 1855. Up to present, 38 *Lathys* species are recorded from the North Hemisphere, including Europe, North America and Asia. Only 3 of them recorded in China: *L. dangthunesis* Hu, 2001, *L. humilis* (Blackwall, 1855) and *L. stigmatisata* (Menge, 1869). Here reported is a new species from the Tree fern (Suoluo) National Nature Reserve of Chishui City, Guizhou Province.

2 Material and Methods

All specimens are preserved in 75% ethanol, and were examined, illustrated, and measured using a Tech XTL-II stereomicroscope equipped with a Camera Lucida. All photos were taken under a Zeiss Stemi 2000-C stereomicroscope with an Optec DV200 Camera. Eye sizes are measured as the maximum diameter from either above or in front. Leg measurements are shown as: total length (femur, patella and tibia, metatarsus, tarsus). All measurements are given in millimeters. Specimens studied here were deposited in the spider collections, School of Life Science, Southwest University, Chongqing, China (SWUC).

Abbreviations used. ALE, anterior lateral eye;

AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye.

3 Taxonomy

Lathys Simon, 1884

Lathys chishuiensis sp. nov. (Figs. 1–16)

Type material. Holotype male, from China, Guizhou Province, Chishui City, Tree fern (Suoluo) National Nature Reserve, Yaoshangou ($28^{\circ}28'N$, $106^{\circ}1'E$; alt. 589 ± 20), 1 May 2008, ZHANG Zhi-Sheng and ZUO Reng-Yong leg. Paratypes: 1 female, same data with the holotype; 2 females, Tree fern (Suoluo) Nature Reserve, Zhuluji Park ($28^{\circ}26'N$, $105^{\circ}59'E$, alt. $500 \text{ m} \pm 20$), 29 May 2008, ZUO Reng-Yong, ZHANG Yufu and WANG Luyi leg.; 1 male, 7 females, Tree fern (Suduo) Nature Reserve, Jinshagou ($28^{\circ}27'N$, $105^{\circ}58'E$, alt. 310 ± 20), 28 May 2008, ZUO Reng-Yong, ZHANG Yufu and WANG Luyi leg.

Etymology. The specific name refers to the type locality, noun.

Diagnosis. The new species is similar to the Japanese species *L. insulana* Ono, 2003 in having the same number of eyes and cheliceral marginal teeth, the small, anteriorly located atria, the copulatory ducts close to each other, the ball-like spermathecae of female epigyne and the presence of tibial spur, the same originated embolus of male palp. But the new species differs from the latter by the widely separated epigynal atria, the relatively thicker copulatory ducts, the presence of a strong patellar spine located anterior dorsally, 2 tibial dorsal spurs and the acute and curved apex of conductor of male palp.

Description. Male holotype (Figs 6–7) total length 2.00: prosoma 0.95 long, 0.85 wide; opisthosoma 1.15 long, 0.85 wide. Six eyes (Fig. 8), without AME, posterior eye row procurved. Eye sizes and interdistances: ALE 0.10, PME = PLE = 0.08; ALE

This project was supported by the Ministry of Science and Technology of the People's Republic of China (MOST grant nos. 2006FY120100 and 2005DKA21404), the Chinese post doctoral Science Fund (20080431265) and the Natural Science Foundation Project of Chongqing (CSTC2008BB7088).

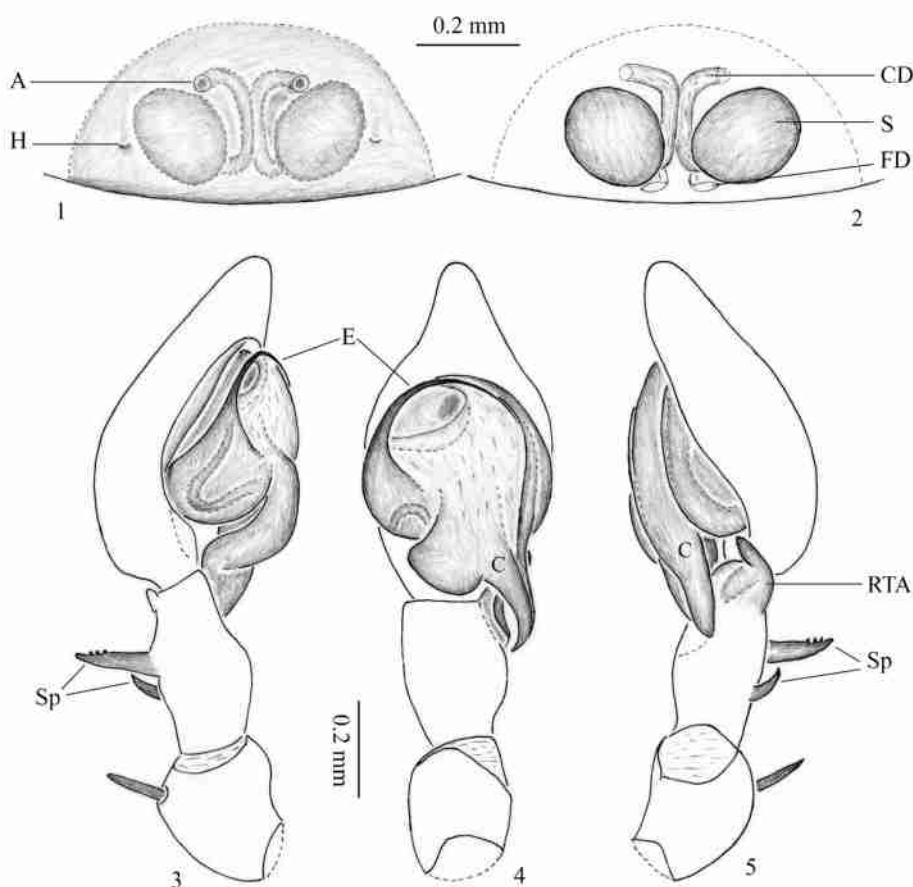
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Received 29 Dec. 2008, accepted 5 Mar. 2009

ALE 0.15, PME-PME= PME- PLE= 0.08. Clypeus (the distance from the anterior margin of ALE to the promargin of carapace) height 0.05. Chilum indistinct. Chelicerae (Fig. 10) stout, with distinct lateral condyles. Anterior margin with 4 teeth. The innermost two pairs larger than the others. Posterior margin with 5 teeth and outermost 2 smaller than the others. Endites longer than wide, nearly twice width. Labium as long as wide. Sternum with truncated anterior margin and relatively blunt posterior one. The ventral spines present on the tibia, metatarsi and tarsi of all legs. A row of trichobothriae present on the metatarsi and the distal one longest, about twice length of the others. Two trichobothria present on the dorsum of tarsi.

Calamistrum deduced, indistinct. Leg measurements: I 3.35 (0.95, 1.20, 0.75, 0.45), II 2.95 (0.85, 1.05, 0.65, 0.35), III 2.40 (0.75, 0.75, 0.55, 0.35), IV 2.75 (0.85, 0.95, 0.60, 0.35). Leg formula: 1243. Dorsum of abdomen with many black and small white markings. Spinnerets (Fig. 9) short and small. Cribellate narrowed than half width of anterior lateral spinnerets.

Dorsum of the palpal patella with a short and strong spine apically. Retrolateral tibial apophysis big, located on the anterior margin of tibia. Two spurs present on the dorsum of tibia and the anterior one with 3 dental processes. Embolus originating from the position of 9 o'clock. The acute and curved apex of conductor located on the retrolateral side of tibia (Figs 3-5).

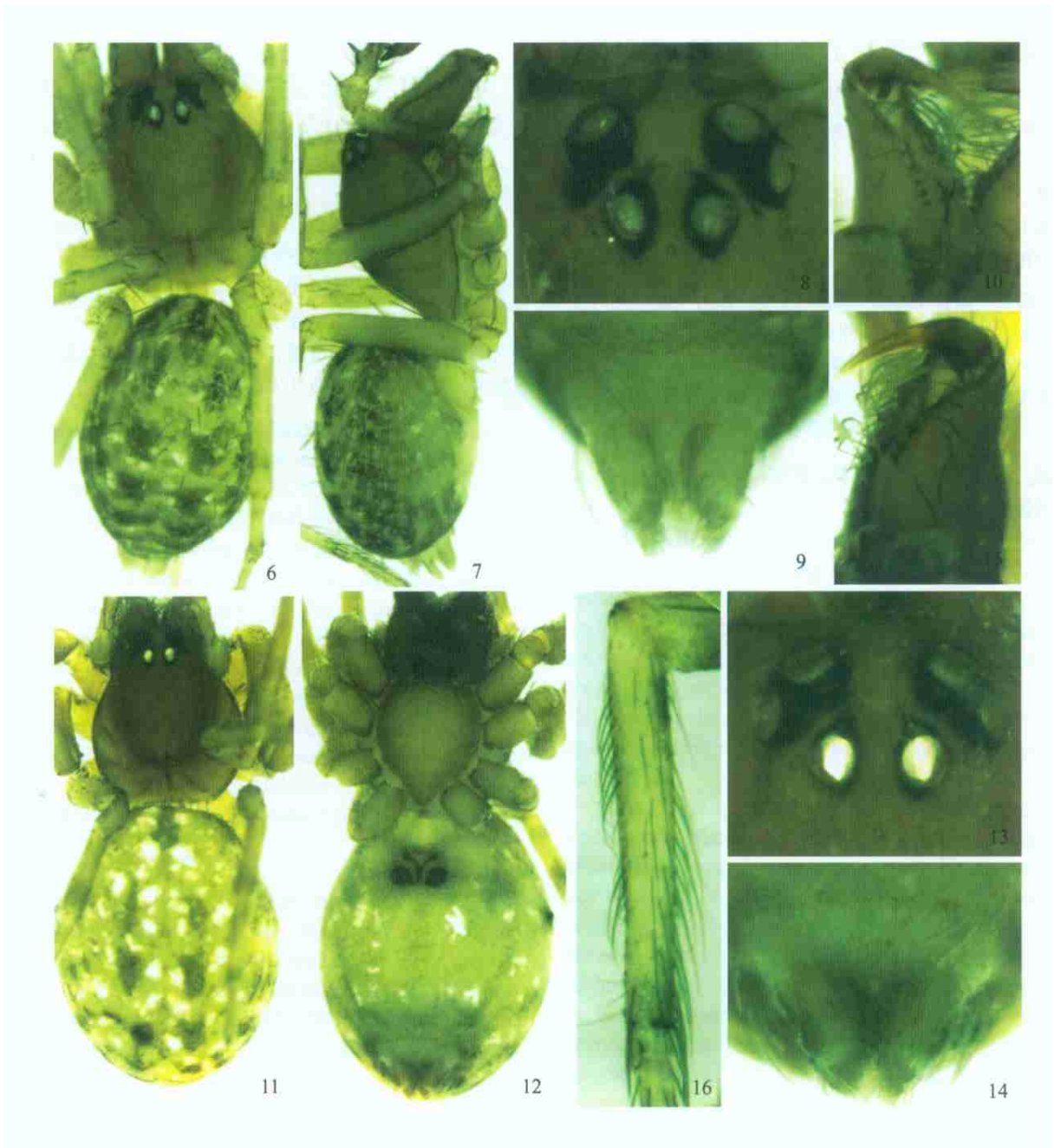


Figs 1-5. *Lathys chishuiensis* sp. nov. 1. Epigyne, ventral. 2. Vulva, dorsal. 3. Left palp of male, prolateral. 4. Ditto, ventral. 5. Ditto, retrolateral. Abbreviations. A, atrium; C, conductor; CD, copulatory duct; E, embolus; FD, fertilization duct; H, hood; RTA, retrolateral tibial apophysis; S, spermathecae; Sp, spur.

Female (Figs. 11-12) total length 2.00-2.45. One of female paratype length 2.45: prosoma 1.05 long, 1.00 wide; opisthosoma 1.50 long, 1.10 wide. Eye (Fig. 13) sizes and interdistances: AME absent, ALE= PME= PLE= 0.08; ALE-ALE 0.15, PME-PME= PME- PLE= 0.08. Clypeus height 0.05. Chelicerae (Fig. 15) with 4 or 5 posterior marginal teeth. Leg measurements: I 3.65 (1.10, 1.30, 0.75, 0.50), II 3.25 (1.00, 1.10,

0.70, 0.45), III 2.50 (0.85, 0.80, 0.55, 0.40), IV 3.30 (1.00, 1.15, 0.75, 0.40). Leg formula: 1423. Calamistrum (Fig. 16) present, its length about a half of metatarsi. Cribellate (Fig. 14) slightly wider than half width of the anterior lateral spinnerets.

Epigyne (Figs. 1-2) with 2 widely separated pores (atria) in the ventral view. Copulatory ducts and spermathecae can also be seen ventrally. Copulatory



Figs 6-16. *Lathys di shuensis* sp. nov. 6. Male (paratype) body, dorsal. 7. Ditto, lateral. 8. Eyes of male. 9. Cribellum and spinnerets of male. 10. Chelicera of male, showing the teeth. 11. Female (paratype) body, dorsal. 12. Ditto, ventral. 13. Eyes of female. 14. Cribellum and spinnerets of female. 15. Chelicera of female, showing the teeth. 16. Metatarsus IV of female, showing the calamistrum.

ducts thin, long and close to each other mesally. Spermathecae oval, widely separately.

Distribution. Known only from the type locality, Chishui City of Guizhou Province, China.

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中国隐蔽蛛属一新种记述 (蜘蛛目, 卷叶蛛科)

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摘 要 记述了采自贵州赤水桫欏自然保护区的卷叶蛛科隐蔽蛛属 1 新种: 赤水隐蔽蛛 *Lathys chishuiensis* sp. nov.。模式标本保存在西南大学生命科学学院。

赤水隐蔽蛛, 新种 *Lathys chishuiensis* sp. nov. (图 1~ 16)

正模 ♂, 副模 1 ♀, 贵州赤水桫欏自然保护区幺站沟, 2008-05-01, 张志升、左仁勇采。副模: 2 ♀ ♀, 桫欏自然保护区侏欏纪公园, 2008-05-29, 左仁勇、张玉富和王露雨采; 1 ♂, 7 ♀ ♀, 桫欏自然保护区金沙沟, 2008-05-28, 左仁勇、

关键词 贵州, 赤水, 卷叶蛛, 新种, 分类.

中图分类号 Q959.226

张玉富和王露雨采。

新种近似于分布于日本的岛隐蔽蛛 *Lathys insulana* Ono, 2003, 二者螯肢前后齿堤上的齿数相同, 外雌器插入孔小且前位, 交媾管左右相互靠近, 纳精囊球状, 雄蛛插入器起始位置相同, 胫节都具有距突。但新种外雌器插入孔间距宽, 交媾管相对较粗, 触肢膝节顶端背侧具 1 长刺, 胫节具 2 个距突, 引导器末端弯曲且尖。

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